



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,921	02/02/2004	Pai-Hsiang Wang	034.0002US	1681

29906 7590 05/19/2005

INGRASSIA FISHER & LORENZ, P.C.  
7150 E. CAMELBACK, STE. 325  
SCOTTSDALE, AZ 85251

EXAMINER

LANDAU, MATTHEW C

ART UNIT PAPER NUMBER

2815

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/770,921

Applicant(s)

WANG ET AL.

Examiner

Matthew Landau

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,14-19,22,23 and 29-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7 is/are rejected.
- 7) ☒ Claim(s) 1-3,6,8-13,20,21 and 24-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, Species I in the reply filed on February 28, 2005 is acknowledged.

Claims 4, 5, 14-19, 22, 23, and 29-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the insulation layer "for electrically insulating said conduction board from said conductive layer" (claims 1 and 20) must be shown or the feature(s) canceled from the claim(s). Note that the passages (e.g. 120) electrically connect the conductive layer to the conduction board, therefore they are not electrically insulated. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the

Art Unit: 2815

drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding 7, the use of the trade name "Teflon" renders the claim indefinite. A trade name cannot be used in a claim to identify or describe a particular material or product (see MPEP 2173.05(u)).

### ***Claim Objections***

Claims 1 and 20 objected to because of the following informalities:

Regarding claim 1, the limitation "an insulation layer, disposed between said conduction board and said conductive layer, for electrically insulating said conduction board from said conductive layer..." is objected to. The claim further requires "a passage for electrically

Art Unit: 2815

coupling said at least one portion of said conductive layer with said second portion of said conduction board.” These two limitations appear to be contradictory. How can the conduction board be electrically insulated from the conductive layer, while at the same time the conductive layer is electrically coupled to the conduction board? Perhaps Applicant should amend the claim to read, “for electrically insulating a portion of said conduction board from a portion of said conductive layer”, or simply state that the insulating layer physically separates the conduction board from the conductive layer. Essentially, it is suggested that Applicant amend the claims in some way to more accurately reflect what is shown in the drawings, specifically Figures 1A-1D. Note that claim 20 has similar problems and should also be amended.

Further regarding claim 20, the limitation “from said conductive layer” is objected to. It is not clear what is meant by this limitation.

Appropriate correction is required.

### ***Allowable Subject Matter***

Claims 1-3, 6, 8-13, and 20, 21, and 24-28 would be allowable if rewritten or amended to overcome the claim objections, set forth in this Office action.

Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including an insulation layer, disposed

Art Unit: 2815

between said conduction board and said conductive layer, for electrically insulating said conduction board from said conductive layer and electrically insulating said first portion from said second portion of said conduction board; and a connection layer, embedded into said insulation layer through said opening, for supporting and electrically connecting said light emitting diode, said connection layer electrically coupling with said first portion of said conduction board and being electrically insulated from at least one portion of said conductive layer.

Regarding claim 20, the prior art of record, either singularly or in combination, does not disclose or suggest the combination of limitations including said insulation layer for electrically insulating said conduction board from said conductive layer and electrically insulating said first portion from said second portion of said conduction board; and a connection layer, embedded into said insulation layer from said conductive layer, for supporting and electrically connecting said light emitting diode, said connection layer electrically coupling with said first portion of said conduction board and being electrically insulated from at least one portion of said conductive layer.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents 6,599,768, 6,822,269, and 6,864,554 – each patent discloses a package for an LED comprising a conductive substrate with two portions, one portion being separated from the

Art Unit: 2815

other by an insulating layer. They also disclose one electrode of the LED connected to one portion of the conductive substrate and the other electrode connected to the other portion.

US PGPUB 2002/0149312 – discloses in Figure 6B an LED package with conductive vias passing through a mounting substrate, while the electrodes of the LED are connected to respective vias.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Landau whose telephone number is (571) 272-1731.

The examiner can normally be reached from 8:30 AM - 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Matthew C. Landau

Examiner

  
TOM THOMAS  
SUPERVISORY PATENT EXAMINER

May 12, 2005